C-3400

User's Guide

C-3400

CONTENTS

470-020171990

This product and its manual may contain technical flaws or typeseting errors. Information contained herein is frequently updated. Changes will be incorporated into subsequent editions.

All specifications are subject to change without notice.

Version 1.00
© Copyright 1992
P/C: CEH920818
Printed in Taiwan

CONTENTS

Chapter 1 Features

CPU
*Intel 80386 DX PGA /AMD80386 DXL PQFP optional in the same socket

*A socket for adding a CPU module, on which 80386DX, 80386 DXL can be installed

Chipset
*Use UMC 82C481B &82C482AF chips plus 82C 206PQFP

-82C481B is Integrated Memory Controller (IMC)

-82C482AF is Integrated System Controller(ISC)

-82C206F is Integrated Peripheral Controller (IPC)

Coprocessor
*A socket on the C-3400 for optional Weiteck 3167 or Intel 80386 math coprocessor

On-Chip Cache Controller
*Direct Mapped organization, write-back update scheme

*Tag RAM :one pcs of 8K8 SRAM, for cacheable range of up to 32MB

 DRAM, for cacheable range of up to 32MB

*One pcs of 32K8 SRAM, for cacheable range of up to 64MB DRAM

Cache Data Size
*Using 8pcs of 8K8 or 32K8 SRAM, can support 64KB/ 128KB /256KB

 optional cache

Form Factor
*218 mm x 258mm with 4 layer PCB

The C-3400 mainboard provides sockets (U5~U8 and U12~U15) for adding a secondary cache of 64KB, 128KB or 256KB.

1. 80387 mode :

   W6 & W7 = on : Enable 80387

2. Cache size jumper setting :

Cache	64K	128K	256K
Bank 0	U5~U8(8K8x4)	U5~U8(32K8x4)	U5~U8(32K8x4)
Bank 1	U2~U15 (8K8x4)		U12~U1(32K8x4)
WC1	2-3	1-2	2-3
WC2	off	off	on
WC3	off	on	on
WC4	1-2	1-2	2-3
WC5	1-2	2-3	2-3
Tag	8Kx8	8Kx8	32Kx8

* W9 : Mono /Color   open :mono close :color

*W8 : Close for burn-in

* W11: 1-2 clear CMOS , 2-3 normal

Installation procedure:

1. Being installing RAM module at BANK0, SIMM 1

2. Carefully align the module board's golden fingers with the module slot.

3. Firmly press down the golden fingers into the slot until they touch the bottom.

4. Push the module board backward until the two plastic pins at the front of the slot fit securely in the two holes on both sides of the module board.

Figure 2-1 The Jumper /Connector Position
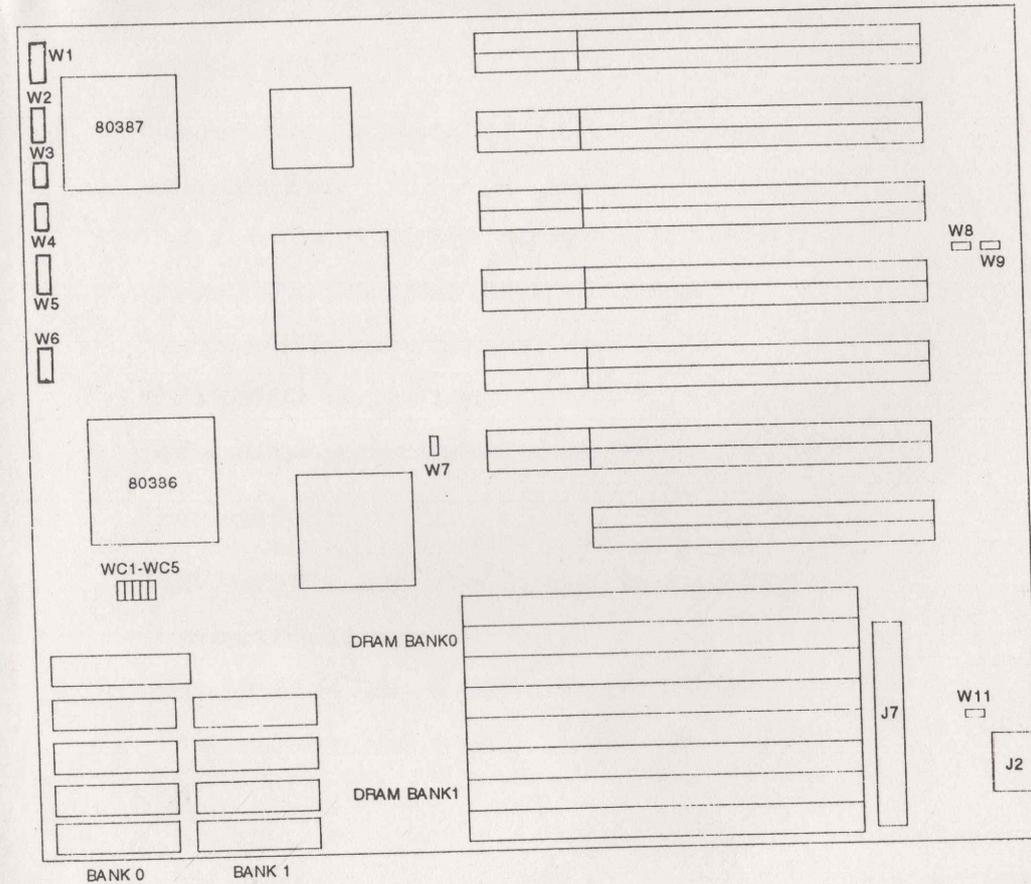
Chapter 3 Memory

3.1 Introduction

Cache Memory

*Socket available for optional cache board for 64KB/128KB/256KB

secondary cache memory running direct-mapped mode with write-back

Memory /RAM

*Standard configuration including 1, 2,4, 8, or 16, 32 megabyte of

on-board memory.

*Page mode memory using 80ns fast page mode DRAMs on

30-pin 256KB, 1MB or 4MB SIMM RAM modules

*Shadow RAM for system BIOS and video BIOS

*256KB/384KB relocation function

*Automatic memory size detection and configuration

Dram on Board

*8SIMM (256Kx9, 1Mx9 or 4Mx9) support up to total 32MB

maximum DRAM space

SIMM 1-4 :256x9, 1Mx9, or 4Mx9 , 1st bank of DREM module

SIMM 5-8 :256x9, 1Mx9 ,or 4Mx9 , 2nd bank of DRAM module

3.2 C3400 System Memory

The C3400 mainboard's memory can be expand from 1MB to 32MB with various combinations of 256 KB, 1MB or 4MB RAM modules.

The following table shows the available configurations of RAM modules and their total on-board memory :

Bank 0	Bank1	Total Memory
256x9		1M
256x9	256Kx9	2M
1Mx9		4M
1Mx9	256Kx9	5M
1Mx9	1Mx9	8M
4Mx9		16M
4Mx9	1Mx9	17M
4Mx9	4Mx9	32M

Chapter 4 Setup Program

4.1 Standard CMOS Setup

C3400 uses ISA-386U3'S AMI BIOS Setup program from American Megatrends Inc.

The Set up program is stored in the BIOS ROM. When you turn the computer on, a screen message appears to give you an opporunity to call up the Setup program. It displays briefly during the POST (Power On Self Test).

Use "STANDARD CMOS SETUP" for recording the basic system hardware setup. If your ISA-386U3 is already installed in a working system, you will not need to use this utility. If the configuration record is lost, you will need to recreate the record. The information can also be lost due to loss of battery support.

```
     BIOS SETUP PROGRAM - STANDARD CMOS SETUP
     (C)1991 American Megatrends Inc.,All Rights Reserved
```

| Date (mn/date/year) : Fri, Aug 14 1992 | Base memor :640 KB |
| Time (hour/min/sec) : 09: 57 :46 | Ext. memory :7424KB |

		Cyln	Head	WPcom	LZone	Sect	Size
Hard disk C : type	: 17	977	5	300	977	17	41MB
Hard disk D : type	: Not Installed

Floopy drive A	: 1.2MB, 51/4"
Floopy drive B	: Not Installed
Primary display	: VGA/PGA/EGA
Keyboard	: Installed

Sun	Mon	Tue	Wed	Thu	Fri	Sat
26	27	28	29	30	31	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5

| Month : Jan, Feb, ...Dec |
| Date   : 01, 02, 03, ...31 |
| Year   : 1901, 1902, ...2099 |

The "hard disk C : type :" and "Hard disk: D : type" refer to the types of hard disks present. Be sure to check the drive specifications. A hard disk will not work properly if you enter incorrect information in this section . There are forty-eight disk selection options. The first is "Not Installed".

You should match your hard disk specifications to one of the listed types.

Note :Entering an incorrect type number will result in the hard disk drive functioning improperly or not at all.When you have made your selections, exit to the initial screen of the program by pressing the ESC key. To finish the set up process, continue on to "ADVANCED CMOS SETUP"

4.2 Advanced CMOS Setup

```
        BIOS SETUP PROGRAM - ADVANCED CMOS SETUP
        (c) 1991  American Megetrends Inc., All Rights Reserved

Typematic Rate Progamming :    Disabled   Video    ROM Shadow  C400,16K  Enabled
Typematic Rate Delay(muse) :   500        Adapter  ROM Shadow  C800,16K  Disabled
Typematic Rate (Chars/Sec) :   15         Adapter  ROM Shadow  CC00,16K  Disabled
Above 1MB Memory Test     :    Disabled   Adapter  ROM Shadow  D000,16K  Disabled
Memory Test Tick Sound    :    Enabled    Adapter  ROM Shadow  D400,16K  Disabled
Memory Parity Error Check :    Disabled   Adapter  ROM Shadow  D800,16K  Disabled
Hit< Del> Message Display :    Enabled    Adapter  ROM Shadow  DC00,16K  Disabled
Hard Disk Tpye 47 RAM Area:    0:300      Adapter  ROM Shadow  E000,64K  Disabled
Wait For < F1> If Any Error :  Enabled    System   ROM Shadow  F000,64K  Enabled
System Boot Up Sequence     :  On
Weitek Processor          :    Absent
Floopy Drive Seek At Boot :    Disabled
System Boot Up Sequence     :  C:, A :
System Boot Up CPU Speed  :    High
Cache Memory              :    Both
Gate A20 Emulation        :    Both
Password Checking Option  :    Setup
Video ROM Shadow C000,16K:     Enabled

  (CTrl) Pu / Pd : Modify   F1:Help   F2/F3 :Color
        F5 :Old Values   F6 :BIOS Setup Defaults   F7 :Power-on De-
```

The Advanced CMOS Setup program is equipped with a series of help screens, accessed by the < F1> key, which will display the options available for a particular configuration feature and special help for some of the options.

The options for the following features of the Advanced CMOS setup are either "Disabled" or "Enabled" :

Typematic Rate Programming

Memory Test Tick Sound

Memory Parity Error Check

Hit< Del > Message Display

Wait for < F1 > If Any Error

Above 1MB Memory Test

Floppy Drive Seek At Boot

Video or Adapter ROM Shadow

The options for "Weiteck Processor" are either "Present" or "Absent".

The options for "System Boot Up Sequence" are "on" or "off".

The options for "System Boot Up CPU Speed"are "High" or "Low".

Note : Depending on the particular hardware and chipset combination of each individual system, the options in the above screen may or may not appear on the Setup Screen, or they may not appear in the same order. There may also be more options for your system than those shown on the Setup screen.